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UNITED STATES DEPARTMENT OF AGRICULTURE
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PROS AND CONS OF MARKETING HOGS ON A GRADE BASIS

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It is indeed a pleasure for me to be here today to participate in your Farm and Home Week Program and discuss with you the marketing of hogs on a grade basis. I might also say that I have some misgivings about discussing the characteristics of hogs in a State like Indiana, particularly here at Purdue, where so much constructive work has been done on hog production and marketing.

I have been informed that research and educational work pertaining to hog production and marketing was undertaken here at Purdue more than 40 years ago; and some of the most constructive contributions to this field of work have been made by men working at this institution. These, as you know better than I, include the work done by Mr. E. L. Scott, in cooperation with the American Meat Institute, Kingan and Company, and others, on "The Influence of Growth and Fattening Processes on the Quantity and Quality of Meat Yielded by Swine"; the work of Mr. C. M. Vestal on swine production and feeding; and the continued constructive efforts of Mr. F. B. King in the interest of improving swine production practices and the development of a type best adapted for production on Indiana farms.

All of this work has been of material assistance to farmers interested in producing hogs. It has also assisted materially in familiarizing packers with the fact that hogs produced in Indiana are fully as uniform with respect to both type and finish as those produced in any of the hog-producing States. In fact, there is ample evidence to indicate that, on the whole, Indiana farmers produce the most desirable hogs from the standpoint of central eastern and eastern packers of any Corn Belt State.

Our work in the Agricultural Marketing Service differs from that of the State experiment stations and the Bureau of Animal Industry in several ways. Their work is directed largely toward the breeding and feeding of hogs to attain the most acceptable market weight and a high degree of perfection in the shortest practical time at a relatively low cost. Our work, on the other hand, is based on the assumption that farmers produce and market hogs of all kinds, weights and degree of finish. It is confined entirely to the marketing of livestock and meat rather than its production. With respect to marketing the Agricultural Marketing Service takes the position that the practice of selling livestock and practically all farm products on the basis of grade is sound in principle and tends to create and promote confidence and stability throughout the marketing process.

It is our opinion that the classifying and grading of swine before they are sold benefits the swine industry in many ways, some of which are as follows:

1. Purchasers are enabled to buy hogs of the class, weight, and grade they want without taking some that they cannot advantageously use.
2. Values can be more accurately appraised. It is obvious that the value of a group of hogs that are of the same class, weight and grade can be estimated more accurately than can a group that is composed of a variety of weights and grades. This simplifies trading and enables buyers and sellers to trade on a basis that more nearly reflects the correct market value of each weight and grade.
3. It provides a basis for accurate market reporting. Thus market patrons may be completely informed as to current market prices for the different weights and grades of hogs marketed. This enables producers to plan their production and marketing program in line with the current and prospective demand for hogs of different weights and grades.
4. It enables buyers and sellers of hogs to make an accurate comparison of prices at different markets. This promotes uniformity in market prices and stability in marketing.
5. It facilitates the purchase of hogs through order buyers by packers who are not adjacent to a continuous source of supplies.

Tentative standards for grades of hogs were established by the U. S. Department of Agriculture when it started reporting the Chicago market back in 1918. At that time as at present, there was a broad export demand for pork and lard, so the standards for hogs were based largely on the degree of finish. The highest grade of hog was a highly finished lard-type hog that was designated as "Prime". A number of years later as the export demand fell off, and lard prices declined in relation to pork prices, the popular demand shifted to a hog that yielded less lard and a higher percentage of the leaner cuts. The Department was requested to revise the hog standards in line with the trend in market demand.

Following a series of discussions with representatives of interested groups within the industry, including producers, marketing agencies, and packers, grade standards were revised to conform with the changes that had taken place in market demand and supply. The changes that were in line with what was considered good production practice. The "Prime" grade was done away with and the Choice grade was split into Choice "meat type" and Choice "fat type" hogs. The kind of hog that had previously been designated as Prime was subsequently called "Choice Fat Type".

The "Choice Meat Type" hog yields a relatively high percentage of the highest priced cuts and is sufficiently well finished to insure that the cuts are of high grade. Hogs of this type and grade normally reach their most desirable degree of finish at from 200 to 240 pounds in weight. They have the advantage from a production standpoint that they can, if necessary, be marketed as relatively well-finished hogs at 180 to 200 pounds in weight; or they may, if necessary, be carried to materially heavier weights and still not become excessively fat.

It is somewhat more difficult to grade hogs than other kinds of live-stock because hog carcasses are not sold as such, as are beef, lamb, and veal carcasses, but are merchandised as primal cuts. The amount of fat that is permitted to remain on primal cuts, as well as the quality of the cuts, has a material bearing on their grade and, of course, their value. The extent to which the fat is removed from the cuts also materially influences the weight of the cuts a given carcass will produce. It follows, therefore, that the grade of a hog carcass is determined by the weight and quality of the cuts it will produce. The grade of a live hog is, therefore, a direct reflection of an appraisal of the weight and grade of the primal cuts it will produce.

The Choice Meat Type hog is one that has a relatively high dressing yield -- that will produce a carcass yielding a relatively high percentage of cuts all of which are of sufficiently high quality to make No. 1 loins, cured hams, bacon, shoulders, etc. The Choice Fat Type hog will yield cuts of equally high quality, but because it is necessary to remove more excess fat, the Choice Fat Type hog yields a smaller percentage of the primal cuts than the Choice Meat Type of comparable weight.

The other grades - the Good, the Medium, and the Cull - produce carcasses that yield a higher percentage of such primal cuts as hams, loins, and shoulders than either the Choice Fat Type or Choice Meat Type hog. These grades are, therefore, based on the amount of carcass they will produce in relation to live weight or yield and the grade of cuts the carcasses will produce.

On the whole, the grades of hogs relate quite closely to the grades of bacon bellies they will produce. This is because the grade of bacon belly a hog will produce relates so closely to its finish. In a general way both the Choice Meat Type and the Choice Fat Type hogs will produce No. 1 or Fancy bacon bellies. The Good grade will produce No. 2 and the Medium grade No. 3 bellies. The Cull grade of hogs produces what are commonly known as "skip" bacon bellies, which are not generally suitable for curing; and are usually made into trimmings.

There are three methods of selling hogs on the basis of grade. The first is the one with which we are all familiar -- that of selling the live hogs on the basis of the buyers' and sellers' best judgment as to the correct grade and value of the animal.

The extent to which hogs are sold on this basis is largely a matter of degree. There are practically no markets at which there is not some sorting for grade as well as for weight. The Cull grade is nearly always sorted off and it is customary to sort off at least ^{part} of the Medium grade hogs at most markets. However, the Choice Fat Type, ^{Choice Meat} and Good grade hogs are almost always sold together and there are frequently some Medium grade hogs included with the higher grades at the same price.

Hogs are also sold on the basis of yield. In other words, the producer is paid for the weight of pork carcasses delivered to the packing house -- a method of purchase that is employed to a limited extent by some packers whose plants are so located that they must buy their hogs through order buyers.

The third method of grading is a combination of yield and carcass grade. By this method settlement is made on the basis of the weight of the carcasses the seller delivers to the packing house and the grade of the carcasses. This is the method that is used quite extensively in Canada and in some European countries. Insofar as I know it is employed in an experimental way in only one packing plant in this country. Producers may, if they so desire, sell hogs on the basis of carcass yield and grade at the Geo. A. Hormel & Company plant at Austin, Minnesota, though Mr. Hormel stated recently that only a very small percentage of their hogs are purchased on that basis. This number does include a good many brought in by farmers who continue to use it each time they have hogs to sell, however.

Both the second and third methods mentioned have some features that are very definitely in their favor. They pay the farmer for the dressed pork he has produced, thus eliminating the factor of fill and other variables that result in marked differences in the yield of hogs of similar grade and weight. They also provide for the identification of hogs that are soft and oily and facilitate the purchase of such hogs at their correct value in relation to hard hogs, rather than discounting the price of all hogs enough to take care of the customary percentage of soft and oily hogs that are normally found in the day's purchases. Bruised hogs may be traced to their origin and corrective measures taken to prevent their recurrence. Likewise, diseased hogs may be identified, traced to their origin, and the necessary corrective measures taken to prevent continued marketing of such animals.

Both of these methods have obvious disadvantages too. In the first place, the sale of hogs on the basis of yield alone places a premium on high yield and normally the highest yield may be expected from the fattest hogs. But they are not always the most valuable hogs to the packer by any means.

Furthermore, there are a number of factors that influence yield -- factors over which the producer has no control. In the heavy marketing season, for example, it may not be convenient for the packer to slaughter the hogs on arrival; they may be carried over for a day or two. This and other considerations that are not within the producer's control may materially affect the yield and consequently his net return.

There is one big objection to marketing hogs on the basis of combination yield and carcass grade. That is the difficulty of developing a standard for hog carcasses that will permit grading on the rail. In other words, there must be a high correlation between the carcass grade and the ultimate value of the carcass. Much of this difficulty grows out of the fact that the price relationship between pork cuts of different weights and grades is continuously changing.

There are both seasonal and regional preferences for specific weights and grades of cuts. For example, New England prefers fairly fat medium-weight cuts, while Baltimore prefers light-weight cuts that are lean; and these sectional preferences are fairly constant. It is only natural, therefore, that the price relationship between hogs of different weights and grades will vary materially as the relative percentage of each grade increases or decreases in market receipts.

Take, for example, light-weight Medium grade hogs in relation to Choice grade hogs. If Medium grade light hogs are scarce, the demand for light-weight lean cuts may be sufficient to justify a price for Medium grade hogs that is quite close to the prevailing price for Choice hogs. If, on the other hand, Choice hogs are relatively scarce and there is an abundant supply of Medium grade hogs, it will inevitably follow that the market value of the Medium grade hogs will be substantially less than that of Choice hogs of corresponding weight.

Furthermore, there are marked differences and consequently there is a range in value between both hogs and hog carcasses of the same grade and weight. A carcass might be placed in the Medium grade, for example, because it has light-weight, thin, tapering, long-shank hams, even though it is sufficiently well finished to produce No. 2 bacon bellies. Another hog carcass might have a Good ham but also be placed in the Medium grade because of lack of finish and firmness. As a result it will produce a No. 3 bacon belly. Obviously the value of these two carcasses would be substantially different for the reason that the discount on the No. 3 bacon belly will amount to materially more than the discount on the No. 2 ham.

It follows, therefore, that there are not only seasonal and regional differences that account for variation in the price differential between grades, but that differences in the value of hogs of the same grade and weight should be reflected in the price for which they sell. The point I am making is this: I do not see how a fixed differential can be established between grades of either hogs or hog carcasses that is equitable, nor can I see how a flat price can be established for all of the hogs or hog carcasses that, for different reasons, fall within a given grade that will represent the value of all of them.

In this respect our system of hog marketing is vastly different from that in Canada, where hogs are sold with a rather high degree of satisfaction on the basis of yield and carcass grade. In Canada they have a consistent export demand for hog carcasses of a specific type, weight, and quality. That demand takes so large a percentage of their commercial production that, over a period of years, it has practically fixed the type. As the carcasses that are exported are sold as Wiltshire sides on a graded basis, it is not difficult to establish an equitable price differential between grades.

In this country, on the other hand, we have a wide variety of types and hogs are sold as cuts rather than carcasses. The price relationship between different weights and grades of these cuts is continually changing as the market supply of the different weights and grades of the hogs from which they are produced changes in relation to the relatively stable demand for cuts of the different weight ranges and grades.

I fully realize that selling hogs on a live basis has many shortcomings, some of which are the inability of buyers and sellers to appraise dressing yields and grade with a high degree of accuracy. There is also a tendency to shift the grade standards in accordance with market conditions. But what I consider the most objectionable feature of the system is the tendency to establish price ceilings for Choice hogs and then proceed to buy hogs of Good and in some cases Medium grade at or close to the ceiling. Despite these serious shortcomings, I still believe our present system of selling hogs on a live weight basis is basically the best adapted to market conditions in this country. It seems to me that the shortcomings of our present marketing system are by no means insurmountable and that they can be ironed out, at least to a material extent.

We in the Department of Agriculture have no preference as to where a farmer sells his hogs. He may send them to a terminal market or sell them "direct". We do think that it is to his advantage to have a maximum flexibility in determining where he sells his hogs. If the producer sells his hogs on a dressed-weight basis, either with or without carcass grading, the identity of the hogs must be maintained until after the carcasses are weighed and graded. While this difficulty is not insurmountable, it does give rise to complications in a complex marketing system. The price the farmer is to get for his hogs, on a live weight basis, cannot be determined until after the hogs are on the rail in the packing house. If, for any reason, the farmer should be dissatisfied, it is then too late to do anything about it.

I do not think there is any method of selling hogs as satisfactory for Corn Belt conditions as on a live-weight basis and I see no reason why they cannot be sold on a grade basis to a far greater extent than is usually the case. A good many people seem to think that to sell hogs on a grade basis would require a material increase in marketing facilities and cause greatly increased expense. We do not see why it should. Most of the markets now have ample facilities and adequate personnel for doing the job. Graders who are State or Federal employees are not necessary. The men best qualified to do the job are the men who are well qualified to buy and sell hogs and who have made doing that job to the best of their ability their life's work.

The extent to which buyers and sellers are justified in combining grades is dependent to some extent on market conditions. Price relationships may be such that the Choice Fat Type and the Choice Meat Type hogs (and possibly the Good grade hogs) may be equitably sold together. Or they may be such that they should be sold as separate grades. One can hardly imagine a market condition, however, that would justify the sale of Medium grade hogs with those of higher grade.

Then, why aren't hogs sold on the basis of grade to a greater extent. The salesman will tell you that the packer buyer won't buy them that way. The packer buyer will tell you that the salesmen won't sell them that way. It seems reasonable to conclude that salesmen will sell hogs on a grade basis when the producers who own them insist on having them sold on that basis. Likewise it seems only reasonable to conclude that the packer buyer will buy them on any reasonable basis that does not increase his total drove cost nor materially increase the cost of his buying operations.

I know of no other method by which producers of the various weights and grades of hogs that constitute the market supply can be assured of a price that correctly represents the relative value of their hogs. And the relative value of each weight and grade is determined by what consumers will pay for the amount and quality of the loins, hams, bacon, etc. those hogs will ultimately produce. It is my opinion that hogs will be sold on the basis of grade just as soon as, but not before, you producers insist on having them sold that way.

(FOLLOWING TABLES USED TO ILLUSTRATE TALK)

AVERAGE YIELD OF CUTS IN PERCENTAGE OF LIVE WEIGHT OF SLAUGHTER HOGS ON THE
BASIS OF U. S. STANDARD GRADES

	: Choice : Fat Type	: Choice : Meat Type	Good	: Medium	: Cull
	Percent	Percent	Percent	Percent	Percent
Bellies	11.11	10.71	9.59	8.73	8.56
Loins	9.19	9.77	10.02	10.30	10.36
Hams	14.20	14.24	14.18	14.29	14.82
Shoulders	10.61	11.06	11.59	11.42	12.56
Subtotal	45.11	45.78	45.38	44.74	46.30
Fat backs	10.96	7.97	5.58	4.51	--
Lean trimmings	3.51	4.04	3.71	4.03	2.07
Spare ribs	1.50	1.62	1.78	1.86	2.07
Neck bones	.81	.94	1.11	1.17	1.58
Feet	1.80	1.92	2.19	2.47	2.83
Tail	.13	.17	.16	.20	.18
Jowls	1.79	1.58	1.54	1.22	--
Fat trimmings and clear plate	5.98	6.43	6.06	5.39	7.97*
Cutting shrink	.41	.55	.49	.41	--
<u>Total yield</u>	72.00	71.00	68.00	66.00	63.00
All fat cuts reduced to P. S. lard	14.79	12.39	9.84	8.28	5.18
Number hogs in each grade	153	63	54	59	20

*Includes fat backs and jowls.

AVERAGE YIELD OF CUTS IN PERCENTAGE OF CARCASS WEIGHT OF SLAUGHTER HOGS ON
THE BASIS OF U. S. STANDARD GRADES

	: Choice : Fat Type	: Choice : Meat Type	Good	: Medium	: Cull
	Percent	Percent	Percent	Percent	Percent
Bellies	15.43	15.03	14.10	13.23	13.59
Loins	12.76	13.76	14.74	15.61	16.44
Hams	19.72	20.06	20.85	21.65	23.52
Shoulders	14.74	15.58	17.04	17.30	19.94
Subtotal	62.65	64.48	66.73	67.79	73.49
Fat backs	15.22	11.23	8.21	6.83	--
Lean trimmings	4.88	5.69	5.46	6.11	3.29
Spare ribs	2.08	2.28	2.62	2.82	3.29
Neck bones	1.12	1.32	1.63	1.77	2.51
Feet	2.50	2.70	3.22	3.74	4.49
Tail	.18	.24	.24	.30	.28
Jowls	2.49	2.23	2.26	1.85	--
Fat trimmings and clear plate	8.31	9.06	8.91	8.17	12.65*
Cutting shrink	.57	.77	.72	.62	--
<u>Total yield</u>	100.00	100.00	100.00	100.00	100.00
All fat cuts reduced to P. S. lard	20.54	17.45	14.47	12.55	8.02
Number hogs in each grade	153	63	54	59	20

* Includes fat backs and jowls.

CARCASS YIELDS AND VALUES OF SLAUGHTER HOGS ON THE BASIS OF U. S. STANDARD GRADES

	Choice	Fat	Type	Choice	Meat	Type	Good	Medium	Yield	Price	Yield	Price	Yield	Price	Yield	Price	Yield	Price	Cull
% Yield : Price	% Yield : Price	% Yield : Price	% Yield : Price	% Yield : Price	% Yield : Price	% Yield : Price	% Yield : Price	% Yield : Price	% Am't. : per	% Am't. : per	% Am't. : per	% Am't. : per	% Am't. : per						
% ver : Am't. : per	% ver : Am't. : per	% ver : Am't. : per	% ver : Am't. : per	% ver : Am't. : per	% ver : Am't. : per	% ver : Am't. : per	% ver : Am't. : per	% ver : Am't. : per	lb. : lv. wt. : lb.	lb. : lv. wt. : lb.	lb. : lv. wt. : lb.	lb. : lv. wt. : lb.	lb. : lv. wt. : lb.						
% Cts. : Dol.	% Cts. : Dol.	% Cts. : Dol.	% Cts. : Dol.	% Cts. : Dol.	% Cts. : Dol.	% Cts. : Dol.	% Cts. : Dol.	% Cts. : Dol.	% Cts. : Dol.	% Cts. : Dol.	% Cts. : Dol.	% Cts. : Dol.	% Cts. : Dol.	% Cts. : Dol.	% Cts. : Dol.	% Cts. : Dol.	% Cts. : Dol.	% Cts. : Dol.	
Bellies	11.11	16	1.778	10.71	16 $\frac{1}{2}$	1.767	9.59	16	1.534	8.73	13 $\frac{1}{2}$	1.179	8.56	13	1.113				
Loins	9.19	19 $\frac{1}{2}$	1.792	9.77	19 $\frac{1}{2}$	1.905	10.02	19 $\frac{1}{2}$	1.954	10.30	18 $\frac{1}{2}$	1.906	10.36	17 $\frac{1}{2}$	1.813				
Hams	14.20	22	3.124	14.24	23	3.275	14.18	22 $\frac{1}{2}$	3.190	14.29	22	3.144	14.82	19	2.816				
Shoulders	10.61	20 $\frac{1}{2}$	2.175	11.06	20 $\frac{1}{2}$	2.267	11.59	20 $\frac{1}{2}$	2.376	11.42	20 $\frac{1}{2}$	2.341	12.56	19 $\frac{1}{2}$	2.449				
Subtotal	45.11		8.869	45.78		9.214	45.38		9.054	47.74		8.570	46.30		8.191				
Fat backs	10.96	9 $\frac{3}{4}$	1.069	7.97	9 $\frac{1}{2}$	.757	5.58	9 $\frac{1}{2}$	.530	4.51	---	---	---	---	---	---	---	---	
Lean trimmings	3.51	13	.456	4.04	13	.525	3.71	13	.482	4.03	13	.524	2.07	13	.269				
Spare ribs	1.50	13	.195	1.62	13	.211	1.78	13	.231	1.86	13	.242	2.07	13	.269				
Neck bones	.81	5 $\frac{1}{2}$	.045	.94	5 $\frac{1}{2}$	.052	1.11	5 $\frac{1}{2}$	.061	1.17	5 $\frac{1}{2}$	.064	1.58	5 $\frac{1}{2}$	.087				
Feet	1.80	4	.072	1.92	4	.077	2.19	4	.088	2.47	4	.099	2.83	4	.113				
Tail	.13	10 $\frac{1}{2}$	.014	.17	10 $\frac{1}{2}$	.018	.16	10 $\frac{1}{2}$	.017	.20	10 $\frac{1}{2}$	.021	.18	10 $\frac{1}{2}$	.019				
Jowls	1.79	10	.179	1.58	10	.158	1.54	10	.154	1.22	---	---	---	---	---				
Fat trimmings & clear plate	5.98			6.43			6.06			5.39			7.97*	Total of all fat cuts.					
Cutting shrink	.41																		
Total yield	72.00																		
All fat cut reduced to P. S. lard	4.39	9.55	11.321	4.63	9.85	11.463	4.24	9.85	11.035										
Total value	11.106																		

Fat trimmings** Fat trimmings and clear plate reduced to P. S. lard

Total value

All fat cut reduced to P. S. lard 1 $\frac{1}{2}$.79 9.85 1.457 12.39 9.85 1.220 9.84 9.85 1.316 5.18 9.85 1.316 10.902 10.336 9.458

